

Enclosure 4

Priority Guideline Issues

EPRI PWR SG Examination Guidelines, Revision 6, Section 5.2, "Degradation Assessment": Section 5.2 should be revised to include clarification similar to the following:

One key objective of degradation assessment is to identify not only currently active degradation mechanisms, but also potential degradation mechanisms which may occur over the lifetime of the steam generators. This is important to ensure that inspection techniques are employed during each inspection which are capable of detecting active and potential degradation mechanisms which may occur over the lifetime of the steam generators at all locations where such mechanisms may potentially occur. Assessment of potential degradation mechanisms should consider, but not be limited to, experience at plants of similar design and materials. Such assessments need also consider factors such as the susceptibility of the tubing material to stress corrosion cracking, operating temperature and pressures, residual stresses associated with tube bending or expansion processes during fabrication, and secondary side water chemistry including the potential for contaminants such as lead, chlorides, sulfates, and copper. It is particularly important for degradation assessments consider that many degradation mechanisms in the past have occurred due to deviation of conditions from nominal; e.g., off nominal material micro-structures or residual stresses due to process control deficiencies during fabrication, design shortcomings leading to fluid-elastic instabilities and fatigue, presence of loose parts and foreign objects.

The following clarification should be included at end of second to last paragraph of Section 5.2, "Degradation Assessment."

This assessment consider any recent experience from other facilities or study results which indicate a need for updating the degradation and operational assessment supporting the planned surveillance interval. For example, the occurrence of stress corrosion cracking at another plant employing similar tubing materials may potentially have implications for when cracks may be expected to first initiate at the subject unit.

EPRI Steam Generator Integrity Assessment Guidelines, Appendix M, "Discussion - Recommended Definition of Burst": Clarification is needed that wear flaws are not necessarily local. Wear flaws were the cause of two SG tube rupture events in the US. Perforations of the tube wall of sufficient size to cause leakage approaching tube rupture accident proportions constitute gross structural failure and, thus, burst. (See additional discussion in accompanying enclosure entitled "Review of Industry Responses to Staff Comments Concerning Prescriptive Steam Generator Inspection Intervals.")

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